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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,154	10/22/2001	Stuart D. Asakawa	10008111-1	4679

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EXAMINER	
MOUTTET, BLAISE L	
ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,154	ASAKAWA, STUART D.	
	Examiner	Art Unit	
	Blaise L Mouttet	2853	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *22-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hall et al. US 5,398,131.

Hall et al. discloses, regarding claims 1, 13 and 16, an aqueous ink-jet ink printing system, comprising:

a specialty ink jet ink comprising an ink vehicle (the volatile media of column 5, lines 38-46) having dispersed therein an effective amount of particulates having directionally dependent multicolor light reflective properties when dried on a substrate and exposed to light (the microencapsulated liquid crystals of column 5, lines 38-46, abstract); and

a specialty ink jet ink pen configured for jetting the ink jet ink (column 6, lines 45-54).

Regarding claim 14, both piezoelectric and thermal pens are taught to be utilized (column 1, lines 48-66).

Regarding claim 15, a transparency is used as the substrate (column 6, lines 62-64).

Regarding claim 17, multi-layering of the LC ink is taught in column 6, lines 50-54.

2. Claims 1, 8-11 and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Bishop et al. US 5,679,138.

Bishop et al. discloses, regarding claims 1, 13 and 16, an aqueous ink-jet printing system comprising:

a specialty ink jet ink comprising an ink vehicle (column 8, lines 47-49) having dispersed therein an effective amount of particulates (the dispersed pigments), said particulates having directionally dependent multicolor light reflective properties when dried on a substrate and exposed to light (column 9, lines 3-52 discuss this aspect of the ink's properties); and

a specialty ink jet pen ink-jet pen configured for jetting the ink jet ink (column 8, lines 57-59).

Regarding claim 8, the pigment particulates are taught to be provided in a range from below 0.009 microns to above 0.026 microns in the example of column 7, lines 48-67. The range is taught to be extended up to the upper bound of 0.100 microns in column 3, lines 8-12.

Regarding claim 9, the pigment particulates are taught to be present in the ink vehicle in a range of approximately 0.1-10% (column 5, lines 61-65).

Regarding claims 10 and 11, the pigments are ink colorants (column 4, line 62 - column 5, line 6).

Regarding claim 14, both thermal and piezoelectric ink jet pens are cited as the selected pen (column 6, lines 59-67).

Regarding claim 15, a substrate is printed upon (column 8, lines 57-63).

3. Claims 1, 2, 5, 6, 9, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Okuda et al. US 5,779,777.

Okuda et al. discloses, regarding claim 1, a specialty ink comprising:

an ink vehicle (as referenced in column 3, lines 1-3); and

a sufficient amount of particulates (pigments) having directionally dependent light reflective properties (i.e. glossiness) dispersed within the ink vehicle such that when the ink is substantially dried on a desired substrate, a multicolored reflected light is emittable in the presence of a light source (column 2, lines 36-39).

Regarding claim 2, pearlescent pigment particulates are specified (column 2, lines 36-39).

Regarding claims 5 and 6, 1-30 microns, preferably 2-15 microns, is specified as the particulate size range (column 2, lines 36-39).

Regarding claim 9, 1-20%, preferably 2-15%, is specified as the particulate presence in the ink vehicle by weight (column 2, lines 51-57).

Regarding claims 10 and 12, additional colorant pigment is utilized attached to the pearlescent particulates (column 3, lines 1-13).

It is noted by the examiner that the claims are directed to an ink composition and the reference to the intended use of the ink as being "ink jettable" does not materially

differentiate the structure of the composition from the applied prior art. The court has repeatedly held that discovery of new properties or uses of a prior art composition does not eliminate the fact that the composition itself was known to the prior art. See MPEP 2112.01.

4. Claims 1-4, 7, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Bujard et al. US 5,855,660.

Bujard et al. discloses, regarding claim 1, a specialty ink comprising:

an ink vehicle (column 11, lines 30-39); and

a sufficient amount of particulates (the core particles of the pigment as described in column 6, lines 26-32) having directionally dependent light reflective properties dispersed within the ink vehicle such that when the ink is substantially dried on a desired substrate, a multi-colored reflected light is emittable in the presence of a light source (column 1, lines 17-30).

Regarding claim 2, mica particles are selected for the core (column 6, lines 33-49).

Regarding claim 3, the core is plate-like shaped (column 6, lines 26-32).

Regarding claim 4 and 7, the particulates are cited to have lengths and widths falling into the range of 3-200 microns and thicknesses ranging from 0.1-5 microns (column 6, lines 26-32).

Regarding claims 10 and 12, other coloring pigments are taught to be attached to the mica pigments (column 10, lines 54-60).

It is noted by the examiner that the claims are directed to an ink composition and the reference to the intended use of the ink as being "ink jettable" does not materially differentiate the structure of the composition from the applied prior art. The court has repeatedly held that discovery of new properties or uses of a prior art composition does not eliminate the fact that the composition itself was known to the prior art. See MPEP 2112.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 13, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gompertz et al. US 5,742,306 in view of Bujard et al. US 5,855,660.

Gompertz et al. discloses, regarding claims 13 and 15, an aqueous ink jet printing system for printing with pigment inks (column 1, lines 55-64) comprising:

a carrier for ink jet ink pens that print on a substrate which is designed to be upgradeable by adding new ink pen types (see abstract, column 3, lines 31-37).

Gompertz et al. fails to disclose a specialty ink jet pen containing a specialty ink as specified in claims 13 and 20.

Bujard et al. teaches, regarding claim 13, utilizing pigment based inks for printing comprising an ink vehicle (column 11, lines 30-39) having dispersed therein an effective amount of particulates (core particles) having directionally dependent properties (column 1, lines 4-30).

Bujard et al. teaches, regarding claim 20, the length and diameter ranges in column 6, lines 26-32.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to upgrade the inkjet printer taught by Gompertz et al. by providing an inkjet pen having the colored-effect pigment inks of Bujard et al.

The motivation for doing so would have been to achieve improved colored properties of printed material as taught by the abstract of Bujard et al.

6. Claims 13, 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gompertz et al. US 5,742,306 in view of Sugita et al. US 5,570,205 and Ostertag et al. US 5,573,584.

Gompertz et al. discloses an aqueous ink jet printing system comprising:

a carrier for standard ink jet ink pens of black and colored inks which print on a substrate which is designed to be upgradeable by adding new ink pen types which ride along with the standard pens (see abstract, column 3, lines 31-37).

Gompertz et al. fails to disclose a specialty ink jet pen configured for jetting the specialty ink jet ink specified and that the specialty ink jet pen is activated when an original is to be marked.

Sugita et al. discloses a common carrier path for originals to be marked and copies to be printed upon (see abstract).

Ostertag et al. discloses a specialty pigment ink comprising an ink vehicle having dispersed therein an effective amount of particulates having directionally dependent light reflective properties which are used to mark originals to protect them from forgery (column 1, lines 5-10).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to include a common paper path for originals and copies for the printer of Gompertz et al. as taught to be utilized in the facsimile apparatus of Sugita et al.

The motivation for doing so would have been that Gompertz et al. suggests incorporation of the printer mechanism in a facsimile device (column 3, lines 51-62) and the facsimile of Sugita et al. offers economic advantageous of reduced size (column 2, lines 1-3).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to utilize a specialty ink pen with the specialty ink that selectively marks originals taught by Ostertag et al. in the apparatus of Gompertz et al. in view of Sugita et al.

The motivation for doing so would have been to prevent forgery of originals as taught by column 1, lines 5-10 of Ostertag et al.

7. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop et al. US 5,679,138 in view of Sekiya US 6,338,545.

Bishop et al. fails to disclose that the average particle size length to pen bore size in diameter is from 1:8 to 1:300 or that the pen bore size is from 20-200 microns.

Sekiya teaches that it is advantageous to provide a nozzle bore for an ink jet pen in a range less than 25 microns for improved resolution while establishing a ratio of 1:100 to 1:1000 for the pigment particle length to pen bore size to prevent nozzle clogging (column 3, lines 21-43).

It would have been obvious for a person of ordinary skill in the art to form the pigment particle size to be in a range including 25 microns and form the ratio of particle size to pen bore diameter so as to be in a range including 1:100 given the teaching of Sekiya.

The motivation for doing so would have been to achieve high resolution while reducing the nozzle clogging problem as taught by column 3, lines 21-43 of Sekiya.

Response to Arguments

8. Applicant's arguments filed June 12, 2003 have been fully considered but they are not persuasive.

Initially the examiner addresses the applicant's arguments regarding the new limitation of the ink being ink jettable.

Claims 1-12 are drawn to an ink composition and claims 13-21 are drawn to an ink jet printing system. The applicant has included the limitation in independent claims 1 and 13 that the ink is ink jettable. Regarding claims 13-21 this feature has already been considered by the examiner in the applied rejections. However regarding claims 1-12

this limitation does not materially differentiate the ink claimed from the ink of the prior art as explained by the examiner in the applied rejections in that it is drawn to the intended use of the ink rather than any structural elements of the ink itself. The courts have repeatedly indicated that claims directed to compositions are not limited by their use or by newly discovered properties of the compositions (see MPEP 2112.01 for specific case citations). Therefore any argument which makes an attempt to overcome the applied prior art by citing what the ink is used for as opposed to what the ink is comprised of is faulty. Furthermore the examiner notes that the applicant teaches in the specification that the ink is made usable in an ink jet printer by altering the dimensions of a nozzle bore of an ink pen rather than any physical property of the ink itself. Therefore since the usability of the ink in the ink jet printer does not necessitate any effect on the properties or material of the ink itself the examiner is correct in upholding the applied rejections against the ink compositions using references not necessarily teaching the use of the ink in an inkjet printer.

Regarding the specific rejections applicant has argued that:

a) Hall et al. '131, as utilized to reject claims 1 and 13-17, was incorrectly applied since Hall uses liquid crystal inks rather than inks that effect the frequency of perceived light when viewed from different directions.

However **the applicant has not claimed that the directionally dependent light reflecting properties as claimed are limited to properties related to the frequency of perceived light rather than the polarizing orientation and thus the claims are not so limiting**. Hall et al. teaches utilizing right and left handed polarized

color LC inks which influence the direction of reflected light depending on polarization. The examiner's rejection is thus correct.

b) Bishop '138, as utilized to reject claims 1, 8-11 and 13-16, was incorrectly applied since the ink of Bishop which scatters light of different frequencies is not the same as the directionally dependent light reflective properties claimed since a change in viewing angle would not effect the reflected colors.

However **the applicant has not claimed that the directionally dependent light reflective properties change colors upon a change of viewing angle and thus the scope of the claims are not so limited**. It is noted that teaching of minimization of the light scattering properties of the ink does not eliminate the fact that the inks taught by Bishop et al. do scatter light in a directional manner.

c) Okuda et al. '777, as utilized to reject claims 1, 2, 5, 6, 9, 10 and 12 was incorrectly applied because of the applied intended use as being "ink-jettable". The applicant has noted such properties as viscosity and pH which are contended to be implicit in the limitation of the ink being "ink-jettable".

However **the applicant has not claimed any such properties of pH or viscosity and thus the claims are not so limited**. It is also noted that many well known devices besides ink jet printers are capable of jetting an ink such as a fluid sprinkler, a pressurized spray can or a pressurized hose and the claims at issue are not seen to be limited in any way to the type of device that performs the ink jetting.

d) Bujard et al. '660, as utilized to reject claims 1-4, 7, 10 and 12 was incorrectly applied because of the applied intended use as being "ink-jettable".

However **the applicant has not claimed any such properties of pH or viscosity and thus the claims are not so limited**. It is also noted that many well known devices besides ink jet printers are capable of jetting an ink such as a fluid sprinkler, a pressurized spray can or a pressurized hose and the claims at issue are not seen to be limited in any way to the type of device that performs the ink jetting.

e) Goperez et al. '306 is improperly combined with Bujard et al. '660 in the applied rejection of claims 13, 15 and 18-20 since there is no disclosure of applying the pigment inks of Bujard et al. in an ink jet printer.

The examiner strongly disagrees with this assessment since Gompertz et al. expressly states that in the disclosed invention new pigment type inks are desired (column 1, lines 55-64 of Gomperez et al.) and Bujard et al. teaches of forming pigment inks with improved coloring effects.

f) Goperez et al. '306 is improperly combined with Bujard et al. '660 and Ostertag et al. '584 in the applied rejection of claims 13, 15 and 20 since there is no suggestion of applying the pigment inks of Ostertag et al. in an ink jet printer.

The examiner strongly disagrees with this assessment since Gompertz et al. expressly states that in the disclosed invention new pigment type inks are desired (column 1, lines 55-64 of Gomperez et al.) and Ostertag et al. teaches of forming pigment inks with the advantageous property of fogeryproofing documents.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet whose telephone number is (703) 305-3007. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, Art Unit 2853, can be reached at (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet June 27, 2003

BM 6/27/2003

Stephen D. Meier
Primary Examiner